REMARKS

A new Abstract is provided, as requested.

The specification is amended as courteously suggested.

A drawing proposal is attached as required.

The allowability of claims 8 and 13 upon attending to the objections under 35 USC 112, second paragraph, which is done above, is acknowledged appreciatively and accepted. It is the applicant's belief that these changes merely for the informalities noted in the action with respect to claims the patentability of which is acknowledged in the Action cannot for this reason affect patentability so as to invoke any present Festo decision.

The rejection of claim 1 under 35 USC 103 for obviousness from the cited Deferme and Thomas patents is traversed, because even the action does not assert that they disclose the constant pressure claimed.

Reconsideration and allowance are, therefore, requested.

Respectfully submitted,

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ABSTRACT

For a vehicle suspension, forward (return) movement of a piston in a damper cylinder is converted into a displacement of a support of an elastic element of a compression (expansion) valve relative to a seat of the valve in accordance with a respective deformation of the elastic element and a respective force with which the elastic element presses a shut-off element to the valve seat.

The device for carrying out the third and fifth main variants of the proposed method has the following distinctions over the device designed for carrying out the first and third main variants of the proposed method.

A device for carrying out the second and fourth main variants of the proposed method is a liquid damper which has a compression chamber and an expansion chamber, which are formed as a result of dividing the damper cavity with a piston. The piston is secured to an end of a rod and consists of at least two elements. During the forward (return) movement of the piston in the working cylinder of the damper, the flow of the working liquid from the compression (expansion) chamber into the expansion (compression) chamber goes through a compression (expansion) channel which includes at least a compression (expansion) valve. The compression valve has:

The device for carrying out the fourth and sixth main variants of the proposed method has the following distinctions over the device designed for carrying out the second and fourth main variants of the proposed method.

Set of Claims What is claimed is:

1. (amended) In a method for adjusting the resistance force of a liquid damper having a cavity of which is divided into at least two chambers, by a piston for the volume of one of which, a compression (expansion) chamber, is the chamber to reduced and as the volume of another, an expansion (compression) chamber, is increased during forward (return) the other of the chambers expands during movement of a the piston, dividing them the piston being positioned in a working cylinder of the damper, wherein due to the action of an excessive pressure formed in the compression (expansion) chamber relative to other cavities of the damper, during forward (return) movement of the piston working liquid flows through a compression (expansion) channel which couples to the compression (expansion) one of the chambers to other cavities of the damper, the action of the excessive pressure of the working liquid on parts of the damper creates a resistance force of the damper, to mechanical energy spent on displacing the piston is consumed to accomplish work on overcoming said resistance force, wherein in order, means to adjust the resistance force of the damper a flow cross section of the compression (expansion) channel is changed depending on the value of the excessive pressure, wherefore the force with which the excessive pressure acts acting on a movable element of a compression (expansion) valve, a current position of which determines a current linear size of a slit of that valve, is balanced by an oppositely directed elastic force of to an elastic element of that the valve, characterized in that controlled displacement is provided for at least one part of the damper whose position relative to another part of the damper affects the size of the improvements wherein the flow cross section of the compression (expansion) channel, the forward (return) movement of the piston is converted into a change of the position of those parts is adjusted relative to one another, wherein each a position of the piston in the working cylinder of the damper sets in accordance therewith a

position of those parts [illegible] and in accordance therewith the value of the flow cross section of the compression (extension) channel corresponding to cavity for a constant value of the excessive pressure.

8. (amended) A method according to claim 1, characterized in that the for adjusting the resistance of a hydraulic damper which has at least two chambers, the volume of one of which, a compression (expansion) chamber, is reduced, and the volume ref the other, an expansion (compression) chamber, .is increased during forward (return) movement of the a piston dividing them in a working cylinder of said damper, wherein due to the action of excessive pressure developed in said compression (expansion) chamber relative to other cavities of said damper during forward (return) movement of said piston, working liquid flows through a compression (expansion) channel which couples said compression (expansion) chamber to the other cavities of said damper, the action of excessive pressure of the working liquid on parts of said damper creates the resistance of said damper, mechanical energy spent on displacing said piston being consumed to accomplish work on overcoming the resistance, wherein in order to adjust the resistance of said damper, a flow cross section of said compression (expansion) channel is changed, depending on the value of excessive pressure, wherefore a force with which said excessive pressure is acting on a movable element of a compression (expansion) valve whose current position determines a current linear size of a slit of said valve, is balanced by an oppositely directed elastic force of an elastic element of said valve, characterized in that said forward (return) movement of said piston is converted into a linear displacement of a support of the said elastic element of

[redacted]said compression (expansion) valve relative to a seat of [redacted]said valve, each position of [redacted] support relative to the seat corresponding to a value of [redacted]said piston in said working cylinder is set in accordance with a respective position of said seat of said valve, a respective value of deformation of [redacted]said elastic element of [redacted]said compression (expansion) valve when closed and a [redacted]elastic respective force with which [redacted]said elastic element [redacted]acts on [redacted]presses said movable element against said seat of [redacted]said valve when closed, [redacted]a current position of which determines [redacted]movable element determining the current linear size of [redacted]said slit of [redacted]said valve.

13. (amended) A device for adjusting the resistance force of a liquid[redacted]hydraulic damper, which device is [redacted]comprises a liquid[redacted]hydraulic damper and has compression and expansion chambers, formed as a result of dividing a cavity of [redacted]said damper with a piston which is secured to a rod, a compression (expansion) channel, through which there is a flow of a [redacted]wherethrough working liquid flows from [redacted]said compression (expansion) chamber to [redacted]said expansion (compression) chamber during forward (return) movement of [redacted]said piston in a working cylinder of [redacted]said damper and which includes at least a compression (expansion) valve which has [redacted]comprises a plate [redacted]covering closing an outlet aperture of the [redacted]channel of [redacted]said valve from [redacted]on the side of [redacted]said expansion (compression) chamber, an elastic element, the elastic deformation of which occurs along [redacted]a longitudinal axis of [redacted]said working cylinder of [redacted]said damper, and a support of the elastic element, which fixes the [redacted]position of the end of [redacted]said elastic element to fix a position of that end of said elastic element which is opposite [redacted]to said piston, relative to a seat of [redacted]said compression (expansion) valve, characterized in that [redacted]said piston of [redacted]said damper and [redacted]said support of

the said elastic element of the said compression (expansion) valve [redacted] are made so as to be capabl of turning separately turning about the longitudinal axis of the said working cylinder of the said damper; at least two longitudinal guides are made provided on the an inner surface of the said working cylinder of the said damper on the within a section coinciding thereof coincident with the piston stroke, at least one of the said longitudinal guides is made being helical; in at each point of the piston stroke a central angle between the guides sets, an angle of turn of the turning said support of the said elastic element of the said compression (expansion) valve relative to the said piston, is preset by the central angle between said guides; a structural element via by which the said piston interacts with one of the said guides, is positioned on a side surface of the said piston facing the inner surface of the said working cylinder of the said damper, a another structural element via by which the said support of the said elastic element of the said compression (expansion) valve interacts with another the other one of said guides, is positioned on a side surface of that support, the support of

the said support facing the inner surface of said working cylinder of said damper; said support of said elastic element of the said compression (expansion) valve has the possibility is made an as to be capable of moving along a cylindrical shank of the said piston, the axis of which shank has an axis thereof coincident with the longitudinal axis of the said working cylinder of the said damper and on the external surface of which is provided with at least one longitudinal, helical guide is made, this on an external surface thereof, said guide sets presetting a longitudinal position of the said support of the said elastic element of the said compression (expansion) valve on the cylindrical shank of the said piston for each angle of turn of the turning said support relative to the said piston; a third structural element, via by

which thesaid support of thatsaid lastic element of thesaid compression (expansion) valve interacts with thesaid guide positioned on the shank of thesaid piston, is positioned on a side surface of thatsaid support facing the cylindrical shank of thesaid piston, thesaid structural element, via by which thesaid support of thesaid elastic element of thesaid compression (expansion) valve interacts with thesaid guide madeprovided on thesaid working cylinder of thesaid damper, has the possibility is made so as to be capable of moving along thatsaid support in the direction of the longitudinal axis of thesaid working cylinder of thesaid damper by a lengthmuch as at leastequal to the maximum lengthtravel of movement of thatsaid support along the cylindrical shank of thesaid piston.